

## Milkstones

Heavy white or yellow buildup on equipment is also called milkstone.

Milkstone deposits are often caused by the minerals in milk or water. Excessively hard water is a common factor in milkstone deposits. Failing to rinse equipment with an acid rinse after milking is also a factor in the development of milkstone deposits.

Milkstone can be removed by mixing acid cleaner at three times the recommended concentration in hot (140 F) water. This mixture should be circulated in equipment for 10 minutes. Follow with a chlorinated alkaline detergent wash. Finally, repeat the acid wash in 95 F to 100 F water.

## Minerals (calcium/magnesium)

Mineral deposits often appear as “chalky” white or gray water spots and film on equipment. On stainless steel they can appear to have a bluish cast.

Mineral deposits can be caused by improper rinsing, dropout of minerals from the water supply, non-acidified rinsing, non-compatible alkaline detergents.

To remove mineral buildup, simply mix an acid cleaner at the recommended dosages in 140 degree F water. Circulate the solution through equipment for a minimum of 10 minutes.

To prevent mineral buildups analyze the water to determine if a water softener is necessary. Be sure that acid rinsing is done.

## Iron

Iron deposits commonly appear as reddish brown or black stains on milking equipment and are often caused by iron in the water supply, improper procedures and inadequate concentrations of cleaners.

Iron is usually removed by using an acid cleaner at 1 oz. to 2 oz. per gallon of solution in 140 F water for 10 minutes. In the case of severe staining, iron remover can be used at 1 ounce per gallon of warm water (120 F).

Depending on the volume of iron in the water, a water softener or iron filter can be quite useful for preventing iron buildup.

## Sulfates/Chlorides

Sulfates and chlorides appear as a powdery white film on equipment and are caused by rinsing with water in excess of 140 degrees F. This type of rinsing causes rapid evaporation of water on surfaces.

Sulfates and chlorides can be removed by mixing acid cleaner at 1 ounce per gallon and circulate the mixture through equipment for 10 minutes to 20 minutes at 120 degrees F. For removal from manual surfaces, brush thoroughly with an acid cleaner.

Preventing the buildup of sulfates and chlorides is very simple. By reducing water temperature to 95 F to 110 degrees F or increasing the dilution rate of acid rinse as necessary.

*Notes*

---

---

---

---

---

---

---

---

---

---